RECEIVED
DEC 05 2014
DIV. OF OIL, GAS & MINING

Form MR-REV-att (DOGM – Revise/Amend Change Form)
(Revised September 14, 2005)

Application for Mineral Mine Plan Revision or Amendment

Operator: CASTLE VALLEY STONE, LLC

Mine Name: BROWN'S CANYON ROCK QUARRY 1 **File Number: M/** 043 / 0017

Provide a detailed listing of all changes to the mining and reclamation plan that will be required as a result of this change. Individually list all maps and drawings that are to be added, replaced, or removed from the plan. Include changes of the table of contents, section of the plan, pages, or other information as needed to specifically locate, identify and revise or amend the existing Mining and Reclamation Plan. **Include page, section and drawing numbers as part of the description.**

DETAILED SCHEDULE OF CHANGES TO THE MINING AND RECLAMATION PLAN

			DESCRIPTION OF MAP, TEXT, OR MATERIALS TO BE CHANGED
☐ ADD	☑ REPLACE	☐ REMOVE	Notice of Intention to Commence Large Mining Operations text. (2 copies and redline/strikeout)
☐ ADD	☑ REPLACE	☐ REMOVE	Exhibits A, B, C, D, E, F and G.
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	
☐ ADD	☐ REPLACE	☐ REMOVE	

I hereby certify that I am a responsible official of the applicant and that the information contained in this application is true and correct to the best of my information and belief in all respects with the laws of Utah in reference to commitments and obligations, herein.

Jeff Sagers
Print Name

Jeff Sagers Managing Member
Sign Name, Position

12-3-14
Date

Return to:

State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
Phone: (801) 538-5291 Fax: (801) 359-3940

FOR DOGM USE ONLY:
File #: M/ /
Approved:
Bond Adjustment: from ($)
to $

O:\FORMS\MR-REV-att.doc

NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

BROWN'S CANYON ROCK QUARRY 1

M/043/0017

SUMMIT COUNTY, UTAH

CASTLE VALLEY STONE, LLC

2421 WEST 350 NORTH

HURRICANE, UT 84747

Prepared by:

North American Mine Services, Inc.

447 North 300 West, Suite #3

Kaysville, UT 84037

(801) 544-3421

~~April 15~~October 6, 2014

RECEIVED

DEC 05 2014

DIV. OF OIL, GAS & MINING

FORM MR-LMO
(Revised March 2011)

FOR DIVISION USE ONLY
File #: M / 043 / 0017
Date Received:
DOGM Lead: Leslie
Permit Fee $ Ck # 6371

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING
1594 West North Temple Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801
Telephone: (801) 538-5291 Fax: (801) 359-3940

NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

The informational requirements in this form are based on provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Rules of Practice and Procedures.

This form applies only to mining operations which disturb or will disturb more than five acres in an incorporated area or ten acres in an unincorporated area at any given time.

"MINING OPERATIONS" means those activities conducted on the surface of the land for the exploration for, development of, or extraction of a mineral deposit, including, but not limited to, surface mining and the surface effects of underground and in situ mining, on-site transportation, concentrating, milling, evaporation, and other primary processing.

"Mining operation" does not include: the extraction of sand, gravel, and rock aggregate; the extraction of oil and gas as defined in Chapter 6, Title 40; the extraction of geothermal steam; smelting or refining operations; off-site operations and transportation; or reconnaissance activities which will not cause significant surface resource disturbance or involve the use of mechanized earth-moving equipment such as bulldozers or backhoes.

Cultural Resources: To fulfill its obligations under Utah Code Annotated 9-8-404, the Division needs cultural resource (archaeology) information. The amount and type of information required will depend on the mine location, the history of previous disturbance, and other factors. Please contact the Division for further information.

PLEASE NOTE: *This form is to be used as a **guideline** in assembling the information necessary to satisfy the Large Mining Operations Notice of Intention requirements. The Permittee / Operator may submit this information on an alternate form, but the same or similar format should be used.*

Table of Contents

R647-4-104 - Operator(s), Surface and Mineral Owners

Provide the name, address and telephone number of the individual or company who will be responsible for the proposed operation. **Business entities listed as the Permittee / Operator, must include names and titles of the corporate officers on a separate attachment.**

1. **Mine Name**: Brown's Canyon Rock Quarry 1

2. Operator name: Castle Valley Stone, LLC
   Mailing Address: 2421 W 350 N
   City, State, Zip: HURRICANE, UT 84737
   Phone: (435) 635-2601 Fax: (435) 635-2694
   E-mail Address: jeff@southweststone.net

   Type of Business:
   Corporation ( ) LLC (X) Sole Proprietorship (dba) ( )
   Partnership ( ) General_____ or _____limited
   Or:
   Individual ( )

   Entity must be registered (and maintain registration) with the State of Utah, Division of Corporations (DOC) www.commerce.utah.gov.
   Are you currently registered to do business in the State of Utah? (X) Yes ( ) No

   Entity # 7472636-0160

   If no, contact www.commerce.utah.gov to renew or apply.
   Local Business License # _____(if required)
   Issued by: County _____or City _____

   Registered Utah Agent (as identified with the Utah Department of Commerce) *(Leave blank if the operator is an individual)*:
   Name: Gary Stark
   Address: 2421 W 350 N
   City, State, Zip: HURRICANE, UT 84747-2046
   Phone: (435) 635-2601 Fax: (435)-635-2694
   E-mail Address: _____

3. **Permanent Address**: _____
   2421 W 350 N
   HURRICANE, UT 84747
   Phone: (435) 635-2601 Fax: (434) 635-2694

4. **Contact Person(s)** *Please provide as many contacts as necessary.*

Name: Jeff Sagers Title: _____
Address: 2421 W 350 N
City, State, Zip: Hurricane, UT 84747
Phone: (435) 635-2601 Fax: (435) 635-2694
Emergency, Weekend, or Holiday Phone: (435) 705-0967 (Cell)
E-mail Address: jeff@southweststone.net
Contact person to be notified for: permitting (X) surety (X) Notices (X) (please check all that apply)

Name: Oren Gatten/North American Exploration Title: Consultant
Address: 447 N 300 W
City, State, Zip: Kaysville, UT 84037
Phone: Cell (801) 719-7479 Office (801) 544-3421 Fax: (801) 544-4554
Emergency, Weekend, or Holiday Phone: (801) 719-7479
E-mail Address: ogatten@nae-xploration.com
Contact person to be notified for: permitting (X) surety ( ) Notices ( ) (please check all that apply)

5. **Location of Operation**:

County(ies) Summit County

~~East~~SE	1/~~24~~	of	NE	1/4	, Section:	20	Township:	1 South	Range:	5 East
~~North~~NW	1/~~24~~	of	SE	1/4	, Section:	20	Township:	1 South	Range:	5 East
NE	1/4	of	SE	1/4	, Section:	20	Township:	1 south	Range:	5 East
_____	1/4	of	_____	1/4	, Section:	_____	Township:	_____	Range:	_____

Comment [OSG1]: Comment 3 - Correct the location of operations to match the intent of the permit. The location now includes the 1/4, 1/4 sections of Section 20, T1S, R5E containing mining operations.

List the names of the surface and mineral owners for any areas which are to be affected by mining. This list should include all private, state and federal ownership and the owners of lands immediately adjacent to the project areas.

6. **Ownership of the land surface** (circle all that apply):
(Private (Fee)) Public Domain (BLM), National Forest (USFS), State of Utah (SITLA) or other:

Name: Thayn Revocable Trust Address: 393 E Vermillion Ave, St. George, UT 84790
Name: _____ Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

7. **Owner(s) of record of the minerals to be mined** (circle all that apply):
(Private (Fee)) Public Domain (BLM), National Forest (USFS), State of Utah (SITLA) or other:

Name: Thayn Revocable Trust Address: 393 E Vermillion Ave, St. George, UT 84790
Name: _____ Address: _____
Name: _____ Address: _____
Name: _____ Address: _____

8. **BLM Lease or Project File Number(s) and/or USFS Assigned Project Number(s):** NA

BLM Claim Numbers: NA

Utah State Lease Number(s): **NA**

Name of Lessee(s): _____

9. **Adjacent land owners:**

Name:	Craig James and Jacqueline Johnson Joint Trust	Address:	8007 S SIESTA DR SANDY, UT 84093
Name:	Kell S. & Martha S. Boland	Address:	PO BOX 2064 STA M CALGARY ALBERTA T2P 2M4, CANADA
Name:	Wright/Garff Resources, LLC.	Address:	405 S MAIN #1200 SALT LAKE CITY, UT 84111
Name:	Gary & Monique Silvi	Address:	1100 BRYNLAWN RD VILLANOVA, PA 19085
Name:	David Swartz & Lauren Lockey Joint Trust	Address:	PO BOX 681596 PARK CITY, UT 84068-1596
Name:	Danforth J. & Darlene J. Coonradt Trustees	Address:	2250 S CAMINO REAL WASHINGTON, UT 84780-8280
Name:	Browns Canyon Stoneworks, LLC	Address:	7684 E WHILEAWAY RD PARK CITY, UT 84098
Name:	Victor J. Byer & Mark Scates Joint Trust	Address:	PO BOX 2489 PARK CITY, UT 84060-2489
Name:	Byer Excavation, Inc.	Address:	PO BOX 2489 PARK CITY, UT 84060-2489

Comment [OSG2]: Comment 5 - Include the names of adjacent property owners. The nine properties adjacent to the leased property have been listed

10. **Have the land, mineral and adjacent land owners been notified in writing**?
Yes __X__ No _____

If no, why not? _____

11. **Does the Permittee / Operator have legal right to enter and conduct mining operations on the land covered by this notice**? Yes __X__ No _____.

R647-4-105 - Maps, Drawings & Photographs

105.1 - Topographic base map, boundaries, pre-act disturbance

(Map Ref: PARK CIRY EAST QUADRANGLE, UTAH, 7.5 MINUTE SERIES (TOPO)

Base Map Checklist

(Base Map not less than 1"=2000'.)

(a) Property boundaries of surface ownership of all lands which are to be affected by the mining operations: **Exhibit A** **Exhibit B**

Exhibit A is the Base Map referenced above, and shows the property boundaries leased by Castle Valley Stone, as provided in the lease from the owner of the land. (Scale of Exhibit A is 1" - 2000')

Exhibit B is an enlargement of the Base Map and shows a more detailed view of the boundaries. Scale of Exhibit B is 1" – 1000')

(b) Perennial, intermittent, or ephemeral streams, springs and other bodies of water, roads, Buildings, landing strips, electrical transmission lines, water wells, oil and gas pipelines, existing wells or bore-holes or other existing surface or subsurface facilities within 500 feet of the proposed mining operations: **Exhibit B**

Exhibit B shows several structures not indicated on the Base map. There are six temporary structures - three storage containers, one small wood building and two mobile offices. These are removable. There are two gates, both lockable, that block motor vehicle entrance into the mining/quarry area from the hard surface road. A power line has been added by the power company that crosses the Southern part of the property parallel to the hard surface road. A fence has been constructed by the company that has the grazing rights to the property and this fence basically borders the hard surface road on the south and west and ties in the two access gates. The streams to the east and west of the mining/quarry site have water in them during runoff in the spring and rains in the early summer. They are well outside the current mining location. The only standing water is in the pond in the far southeast corner and the stream that crosses the far northeast corner of the property. This pond and the stream are not disturbed by our mining operation.

Comment [OSG3]: Comment #6 - Typo – curstructed Corrected

(c) Proposed route of access to the mining operations from the nearest publically maintained highway (Map and scale appropriate to show access. **Exhibit B**

Gated access roads are noted on Exhibit B in brown.

(d) Known areas which have been previously impacted by mining or exploration activities within the proposed land affected: **Exhibit B**

A very vague, unimproved road follows directly under the power line and is used by the power company when maintaining or inspecting the power lines.

(e) Areas proposed to be disturbed or reclaimed over the next five years of the project or suitable time period: **Exhibit C**

The current area disturbed by mining, the proposed expansion for the next five years and the "Landslide" area are illustrated on Exhibit B. Final reclamation of the mine areas and cross sections depicting pre-mining and post-mining slopes are shown on Exhibit E.

Exhibit C
Exhibit E

105.2 - Surface Facilities Map

Surface Facilities Map Checklist

(Surface facilities map scale not less than 1"=500'.

(a) Proposed surface facilities pertaining, but not limited to: buildings, stationary mining/processing equipment, roads, utilities, power lines, proposed drainage control structures, and location of topsoil storage areas, overburden/waste dumps, tailings or processed waste facilities, disposal areas for overburden, solid and liquid wastes, and wastewater discharge treatment and containment facilities. **Exhibit D**

The following can be found in Exhibit D:

-Buildings. There are six temporary structures. Three storage containers, one small wood shed and two mobile offices. These structures will be removed during reclamation.

-Roads. As best can be predicted, roads are indicated in green on the map. Existing roads will be used to the maximum extent and new mine roads will be reclaimed during project closure.

-Power-Lines. There is one power line in the southern portion of the quarry that is parallel to the hard surface road.

-Topsoil Storage Area. ~~Soil is very sparse in the quarry area.~~ Available soil will be stockpiled for reclamation. Adequate soil will be stockpiled to assure that 6-12 inches of soil will be available for coverage of all disturbed acres during reclamation. Sand and fines generated by the mining process may be added to the soil stockpiles. ~~There may be a requirement to establish a borrow pit in an area with more soil.~~ Soil stockpile areas will be reclaimed during project closure.

- Rock Overburden/Waste Dump Sites. ~~Overburden/waste dump sites are identified on Exhibit D.~~ In one location, waste rock has been dumped over a steel slope and the toe of the dump is gradually moving as it is pushed by the weight of the material up-slope. This land slide area is also identified on Exhibit ~~D~~C.

- The following facilities are not planned to be part of this mining operation: stationary mining/processing equipment; utilities; drainage control structures; waste facilities for solid and or liquid waste; and wastewater discharge treatment and containment facilities.

Comment [OSG4]: Comment #7 Typo- "1:=500'; please correct. Noted/Corrected

Comment [OSG5]: Comment #8 The text says, " ... . there may be a requirement to establish a borrow pit in an area with more soil." As discussed and agreed upon, the original soil survey noted more than adequate soils on the site. Please rewrite. Done

Comment [OSG6]: Comment #9 The text indicates dump locations are identified on exhibit D, but there are no dump locations noted on Exhibit D.The reference to the waste dumps on the map has been deleted and the land slide is correctly referenced to Exhibit C.

Comment [OSG7]: Comment #10 The text indicates Exhibit D shows the number of acres to be affected by the operation and that it has a border outlining the mining area. Exhibit D is the surface facilities map and does not have a clear border. It also does not show all mining, storage and operating areas.The land slide is referenced and shown on Exhibit C

(b) A border clearly outlining the extent of the surface area proposed to be affected by mining operations and the number of acres proposed to be affected: **Exhibit D**

The proposed surface area to be affected by our long mining intent is indicated on Exhibit D, and includes all roads, mining, storage and operating areas. It will be approximately ~~25~~37.4 total acres.

(c) The location of known test boring, pits, or core holes.

There are no known existing nor projected test boring pits or core holes.

Reclamation Treatments Map Checklist

(Reclamation Treatments map scale 1~~"~~:-250',)

(a) Areas of the site to receive various reclamation treatments are ~~shaded, cross hatched or~~ color coded to identify which reclamation treatments will be applied. In general, reclamation will consist of putting waste rock and subsoil back into the quarried out portions as the quarry face recedes to the west- This will be followed by contouring and smoothing of affected areas with a dozer and re-spreading topsoil ~~(when available),~~ and/or composted manure. Areas will be seeded with approved seed mixtures. Final reclamation will consist of re-grading all disturbed areas not previously reclaimed, and applying topsoil or composted manure and seeding. Areas include: **Exhibit E**

1) Buildings. Temporary building structures are three storage containers, one small wood building and two mobile offices. These will be removed from the quarry and the areas will be re-graded and ripped, as necessary, then seeded.

2) Roads. All roads will be re-graded, fertilized and broadcast seeded. Roads that are devoid of any top soil will be covered with a mixture of soil and manure and overburden. This will then be graded and seeded.

3) Topsoil Storage Areas. Topsoil will be removed from the storage areas for various reclamation uses. The storage area will be graded, fertilized and seeded.

4) Overburden/Waste Dumps. Overburden that remains after use in other areas of the quarry to augment reclamation will be mixed with manure and the overburden of the site will be smoothed and seeded. One waste dump is currently moving due to up-slope loading. No additional waste will be added to this dump, and Castle Valley Stone will develop a mitigation plan to stop the progress of the waste and submit the plan to the Division with the 2014 annual mine report.

5) Central Mine Operating Areas. These areas are those that will remain after mining operations cease, not included as roads, storage areas or overburden/waste sites. These areas also include the less than 3H:1V~~3 horiz:1 vert, and 45 degree~~ slopes. These areas will be ripped (where feasible) graded, covered with a mixture of top soil, manure and overburden and seeded.

6) Trash/Waste. Any trash or limited waste materials will be kept in metal receptacles and periodically taken to the appropriate dump/landfill site.

Comment [OSG8]: Comment #15 - Please update the maps and edit numbers in the text to match the maps. The text says there are 25 acres. The total acres disturbed to date, including the stockpiles, dumps and landslide are 29.7. An additional 7.7 acres of disturbance is planned. Total 37.4 acres. No conflict with the maps.

Comment [OSG9]: Comment #11 Typo - As written "... 1"-250'; please correct. Noted/corrected

Comment [OSG10]: Comment #12 - The text refers to a cross hatched area, but nothing on Exhibit E is cross hatched. Please remove the words cross hatched. Text now reads, "Areas of the site to receive various reclamation treatments are color coded to identify which reclamation treatments will be applied"

Comment [OSG11]: Comment #13 - As written "...(when available)". Please remove. Removed

Comment [OSG12]: Comment 19 - As written " ... 3 horizontal: I vertical and 45 degree slopes." Please rewrite to provide consistent slope designation. The map and cross section both show the final slopes as "3H:1V," so the text should also be as "3H: 1V." Correction made.

7) Public Safety and Welfare. The quarry and mining sites are private property and it is not expected that it will become public after mining ceases, thus limiting public access. Currently, a barbed wire fence surrounds the property on three sides. Only the northern portions of the leased property are not fenced. There are two access roads from the hard surface road to the south and both of these roads are gated. The eastern gate is open for daily traffic and is locked after hours (usually 7:00 PM to 7:00 AM) and on Sundays. Danger/Warning and no trespassing signs are posted along the power lines facing the hard surface road and on both access gates. If high walls remain after mining operations have ceased and reclamation is complete, then warning signs will be posted around the high wall with the appropriate hazards identified. During deer hunting season, permission to enter and hunt must be obtained in writing from the Castle Valley Stone, which serves to ensure those hunting on the property know the dangers of the mining operation.

(b) A border clearly outlining the extent of the area to be reclaimed after mining, the number of acres disturbed, and the number of acres proposed for reclamation: **Exhibit E**

The border outlining the acres to be reclaimed is as shown in Exhibit E.

(c) Areas disturbed by this operation which are included in a request for a variance from the reclamation standards: **Exhibit E**

(d) Highwalls which are proposed to remain steeper than 45 degrees and slopes which are proposed to remain steeper than 3~~-horizontal~~H:1~~-vertical~~V. **Exhibit E**

~~At this time it is not anticipated that we will leave any highwalls.~~The overall slope of highwalls will be 45 degrees or less. ~~We will attempt to grade slopes to less than the 3 horizontal:1 vertical~~Final slope grades of waste piles, overburden stockpiles and areas not characterized as highwalls will be 3H:1V maximum.

Comment [OSG13]: Comment #18 - Please provide a cross section perpendicular to the current high wall which shows the 3H: I V final highwall and the current topography. Then rewrite text to describe what the final slope configuration will be. The overall slope of highwalls will be 45 degrees or less

Comment [OSG14]: Comment #20 Please reword this section as it does not match Exhibit E. Wording in the second paragraph does not contain firm commitments. Please rewrite this paragraph removiing "attempt" and "anticipated ." Final slope grades of waste piles, overburden stockpiles and areas not characterized as highwalls will be 3H:1V maximum.".

105.3 – Drawings or Cross Sections (slopes, roads, pads, etc,)

Cross sections of pre-mine and post mine slopes are shown on Exhibit E.

105.4 - Photographs

105.4 – Underground and Surface Mine Development

There are no current or planned underground operations at the Brown's Canyon Quarry.

R647-4-106 - Operation Plan

106.1 - Minerals mined

Quartzitic Sandstone

106.2 - Type of operations conducted, mining method, processing etc.

Rock is mined by the following methods and procedures, which will assume a start to finish process:

1. Blasting. No blasting is currently planned for the quarry. Material is removed using a tracked excavator. If blasting becomes necessary, it will be performed by a licensed contractor in accordance with industry standards for vibration compliance, MSHA regulations and ATF compliance. No explosives or blasting accessories will be stored at the mine site. ~~Digging. Post-blast, a tracked excavator (track hoe) is used to pull "loose" rock from the blast area into piles of various sizes.~~ In this small mining operation, there are some boulders that are too large for moving into piles. These are normally split in place by use of ~~another~~ tracked excavator with a large hydraulic hammer device attached. ~~These pieces are then moved" as above.~~

~~1.~~2. Excavation. Rock from the quarry is excavated using tracked excavators, loaders and trucks for hauling. The stone is removed from the face of the highwall along the natural dip angle of the bedded rock. As the highwall is mined, a bench is formed. The dip of the bedded rock is approximately 50 degrees. However, the stone is well fractured and the overall slope of the highwall is maintained with a maximum slope of 1H:1V.

~~2.~~3. Loading. Bulk rock (usually 2' - 6' boulders or larger slabs, rock that is normally flat and from 3' x 3' x 6- up to 10' x 16' x 24") are then loaded into dump trucks and hauled away as delivery orders, or they may be hauled to another location for splitting into l" - 5" thick patio/wall stone.

4. Processing. Stone is cut using hand tools or a Chris Cutters by Cee-Jay Tool. The Chris cutters utilize hydraulic pressure to split stone. The same type of hydraulic fluid used in the cutters is used in other pieces of heavy equipment on the site. No other deleterious material is required.

~~3.~~5. Stockpiling. Rock is also stockpiled at the quarry according to its product use, by size and color. Boulders and slabs are stockpiled near the quarry fringes and are selected as required for orders. Some smaller boulders (6" - 18") are also stockpiled. All other material is dumped into rows and hand split by workers who make flagstone products. It is then palletized and put into inventory.

6. Clearing. Smaller rock (usually under 1') and other debris (very small pieces of rock and dirt mix) is picked up by a track loader (D77) and moved to the outer fringes of the digging site as overburden. Waste dirt, or dirt that we determine can be re-utilized for future reclamation is moved to specific locations on the outer fringes of the quarry access road and stockpiled.

Comment [OSG15]: Comment #22 - The plan says no blasting is planned, yet the text after digging is written in a tense indicating blasting is ongoing. Sentence after "Digging" deleted.

Comment [OSG16]: Comment #23 - It appears "Digging" should be a separate heading (#2). Otherwise it is a stray word not connected with any tense. Deleted the term "Digging" and the sentence about using an excavator to remove blasted rock.

Comment [OSG17]: Comment #24 - As previously written "Address onsite processing (guillotine) and if any deleterious materials are used on site." Processing should be number 3 in Section 106.2, type of operations conducted. Processing. Stone is cut using hand tools or a Chris Cutters by Cee-Jay tool. The Chris cutters utilize hydraulic pressure to split stone. The same type of hydraulic fluid used in the cutters is used in other pieces of heavy equipment on the site. No other deleterious material is required.

4.7. Crushing and screening. New waste rock and rock that is presently in the dump and landslide areas may be crushed and/or screened for various aggregate products. Very little to no waste material will be generated by crushing as all rock and gravel material can be sold. Excess unconsolidated fines from crushing may be used as plant growth medium for reclamation. The volume of rock to be crushed will depend on demand for aggregate during the life of the mine. Rock that is presently part of the landslide and waste dumps may be crushed for aggregate. Crushing and screening will be done by a licensed contractor with a valid air quality permit for crushing, or by Castle Valley Stone after obtaining an air quality permit for crushing. Run-of-mine waste may be sold and transported from the quarry and crushed off site under separate permit from the Brown's Canyon Rock Quarry.

8. Concurrent Reclamation. Areas disturbed are now smoothed over and cleared of as much debris as feasible. Concurrent reclamation is planned, but not yet active. Our future intent is to use some waste dirt available to smooth and contour those areas that we will not expect to disturb in further operations and are candidate areas for reclamation. ~~We would prefer to leave unseeded until we have a minimum of an acre that we have reclaimed. In other words, as we continue operations, our intent will be that reclamation is continuous.~~ Topsoil stockpiles will be seeded periodically with an interim seed mix consisting of ryegrass, crested wheatgrass or a Division recommended seed mix. This will help to control weeds and reduce erosion. Weeds throughout the mine and on the stockpiles will be sprayed in late May or early June of each year.

~~5.~~9. Landslide Area – This area is to be reclaimed concurrently with mining beginning in 2014 and concluding in approximately three years. Castle Valley will remove rock from the top of the slide and process the useable material as described previously in this section. Remaining rock, from the landslide area, if any, will be placed in stable stockpiles or waste dumps. Soils beneath the landslide will be salvaged for use during reclamation. The exposed soils remaining below the slide will be seeded periodically to discourage weeds with either an interim seed mix or approved seed mix for reclamation.

Formatted: Font color: Red

Comment [OSG18]: Comment #25 - Please restore the comment that "concurrent reclamation is planned, but not yet "active". Comment restored as directed.

Comment [OSG19]: Comment #26 - The plan now contains a statement that topsoil stockpiles will be seeded periodically, but please either remove the vague statement " ... prefer to leave unseeded" or add a statement about weed control. Deleted the sentence with the term "prefer to leave unseeded" and added a sentence at the end of the paragraph committing to spray weeds annually.

Formatted: Font color: Red

Comment [OSG20]: Comment #24 - As previously written, "The text needs to address how the landslide will be remediated." The plan needs to address the landslide prior to the 2014 annual report. Include a brief paragraph under the Operation Plan. The text on page 15, item 8, should be moved from operation practices to the operation plan. As suggested, the details for reducing the potential for further sliding and removing the slide material have been moved from the operation practices section to the operation plan section.

106.3 - Estimated acreages disturbed, reclaimed, annually

(Acreage listed here should match areas measured off the maps provided)

	Current Operation		5 Year Proposal	
Areas of actual mining:	~~12~~16.7	Acres	~~16.5~~21.9	Acres
Overburden/waste dumps :	3	Acres	5.5	Acres
Ore and product stockpiles:	~~1.5~~4.0	Acres	~~1.5~~4.0	Acres
Access/haul roads:	2	Acres	2.0	Acres
Associated on-site preparation facilities:	1	Acres	1	Acres
Tailings Disposal:	0	Acres	0	Acres
Other -Landslide:	3.0	Acres	3.0	Acres
Total Acreage	**~~23~~29.7**	**Acres**	**~~29.5~~37.4**	**Acres**

106.4 - Nature of materials mined, waste and estimated tonnages

(a) Describe the typical annual amount of the ore and waste rock/overburden generated in cubic yards.

Ore	15,000	Short Tons
Waste/Overburden	8,000	Short Tons

(b) Where does the waste material originate?

Waste is a combination of very small amounts of soil and small pieces of rock that break up during blasting and mining operations.

(c) What is the nature of the overburden/wastes (general chemistry/mineralogy and description of geologic origin)?

Gravely, cobbly loam.

(d) Will it be in the form of fine or coarse material?

Coarse

(e) What are the typical particle sizes and size fractions of the waste rock?

Thickness of Overburden:	6"-12"	Inches
Thickness of Mineral Deposit:	N/A	Tons
Estimated annual volume of overburden:	N/A	Tons
Estimated annual volume of Tailings/Reject materials:	N/A	Tons
Estimated annual volume of ore mined:	15,000	Tons

Overburden/waste description:

_-Small, course rock mixed with dirt.

106.5 - Existing soil types, location, amount

Provide specific descriptions of the existing soil resources found in the area. Soil types should be identified along with depth and extent, especially those to be directly impacted by mining.

Soils. The plan shall include an order 3 Soil Survey (or similar) and map. This information is needed to determine which soils are suitable for stockpiling for re-vegetation. This soil data

may be available from the local Soil conservation service office, or if on public lands, from the land management agency. The map needs to be of such scale that soil types can be accurately determined on the ground.

The soils in the quarry area have been mapped by the Natural Resources Conservation Service (NRCS) as Ayoub cobbly loam on the natural slopes with 2 to 15% slopes and Ayoub-Dunford-Melling complex on slopes from 30 to 60% (See Exhibit F – Rock Products of Utah Vegetation and Soil Baseline Report). The mine expansion area is vegetated with Gambel Oak, which is common in the Dunford soils of the complex. The NRCS profile of the Dunford soil includes 0-10 inches cobbly loam, 10 to 21 inches gravelly clay loam, 21 to 36 inches gravelly clay loam and bedrock from 36 to 46 inches below the surface. The Vegetation and Soil Baseline Report prepared in 2000 indicated that the Dunford soil at the site differed slightly from the NRCS profile in that the A horizon was 12 to 14 inches thick.

The area of expansion is 7.7 acres. The depth to bedrock ranges from 20 to 40 inches, with an average of 30 inches. From the expansion area it will be possible to stockpile approximately 31,000 bank cubic yards of overburden. The landslide area is 3.0 acres. As part of the process of reclaiming the slide area, topsoil from beneath the slide will be stockpiled. The depth of soil beneath the land slide is also 20 to 40 inches. With an average depth of 30 inches, approximately 12,000 bank cubic yards of overburden will be salvaged from the landslide for stockpiling.

The overburden is classified primarily as cobbly loam. The total bank cubic yardage planned for stockpiling is 43,000bcy. The overburden has a swell factor of 1.25 when loosened for stockpiling. The volume of the loose stockpiled soil will be approximately 53,750cy. (53,000cy rounded)

(a) ~~Each soil type to be disturbed needs to be field analyzed for the following:~~Ayoub-Dunford-Melling complex soil analysis:

Depth of Soil Material	6-12 inches
Volume (for Stockpiling)	~~±194,000cy~~43,000cy
Volume of Soil Stockpiled to Date	±1,000cy
Volume of soil Remaining to Stockpile	42,000cy
Texture (Field determination)	cobbly loam
pH (Field determination)	6.5 undisturbed
(cross ref with item 106.6)	8.0 overburden

(b) Where there are problem soil areas (as determined from the field examination) laboratory analysis may be necessary. Soil samples to be sent to the laboratory for analysis need to be about one quart in size, properly labeled and in plastic bags. Each of the soil horizons on some sites may need to be sampled. Soil sample locations need to be shown on the soils map. Soil analysis for these samples should include: texture, pH, EC (conductivity), CEC (Cation Exchange Capacity), SAR, % Organic Matter, Total N, Available Phosphorus (as P_2O_5), Potassium (as K_2O), and acid/base potential.
See Exhibit F for details.

Comment [OSG21]: Comment #27(b) - The plan has now been changed to state 6-12 inches of soil will be salvaged (under 106.5) and 6-10 inches (under 106.6). The total cubic yards appears to be calculated on the low end (6 inches), which makes one think there is no intent of salvaging more than a 6-inch depth. The original soils indicated a soil depth of 10-12 inches. While the plan has been changed from the 1-6 inches depth, it does not reflect the soil that was reported originally, nor does the plan provide an updated soils survey to demonstrate the original soil survey was in error. Please correct to show 10-12 inches of soil available for salvage/stockpiling and base the estimated salvage amount on the mid-point of II inches (yielding approx. 39,930 yds3 of soil. Volume of the soil stockpiles has been increased to hold sufficient soil to cover with 12 inches. The original estimated accounted for concurrent reclamation and the land slide, which has soil in place beneath the slide and will not require soil from the stockpile.

Comment [OSG22]: Comment #27(a) - Please provide the volume of soil that has been, and will be stockpiled. This is not clear, and the volumes conflict. Section 106.5 indicates +/- 19,000 yds3 of soil is available, but it doesn't break down how much has been salvaged and how much more will be salvaged. Section 106.6 indicates 22,500 yds3 will be stockpiled. The amount of soil currently stockpiled and that which is to be stockpiled in the future is listed.

106.6 - Plan for protecting & re-depositing soils

Thickness of soil material to be salvaged and stockpiled:	6-~~10~~-12 inches
Area from which soil material can be salvaged (Exhibit B)	27 acres
Volume of soil to be stockpiled (Exhibit B):	Stockpile 1: ~~12~~25,000CY
	Stockpile 2:

~~10,~~528,000CY

(Cross reference with 106.5(a))

Topsoil will be salvaged from the expansion area between the current pit and the highway, from the landslide area during reclamation and from the proposed expansion to the east of the current main access road. See Exhibit B for the location of the expansion areas and "Landslide."

Comment [OSG23]: Comment #29 - See comment under R647-4-106.5 regarding soil depth. Revise the plan to show proper depth of soil to be salvaged and protected for reclamation. Noted and revised with 6-12" of soil to be stockpiled.

106.7 - Existing vegetation - species and amount

Vegetation - The operator is required to return the land to a useful condition and re-establish at least 70 percent of the pre-mining vegetation ground cover.

~~Provide the Division with a description of the plant communities growing onsite and the percent vegetation cover for each plant community located on the site. Describe the methodology used to obtain these values~~Most of the vegetation in the mine are has been disturbed by previous mining activity. The expansion area is primarily vegetated by Gambel Oak stands. The "Rock Products of Utah Vegetation and Soil Baseline Report" (See Exhibit F) identified the vegetation cover of three sample sites to be 19%, 52% and 30% respectively. Rather than conduct a new survey for the expansion, 50% is the estimate for pre-mining vegetation ground cover. The reclamation requirement is that the land be returned to a useful condition with a minimum of 70% of the pre-mining vegetation ground cover. All areas in the mine will be reclaimed with a minimum of 35% vegetation ground cover.

Comment [OSG24]: Comment #30 - As previously written: "While the original permit area (6 acres) may have had only 30 % vegetation cover, much of the area where expansion has occurred has much more vegetation (the adjacent quarry in the same vegetation type reported 52% cover). Please provide an updated vegetation survey which correctly identifies the vegetation cover in the expansion area." The Vegetation survey does not accurately depict the current vegetation type, nor were sufficient samples taken. Please provide an adequate vegetation survey of the area (and/or surrounding areas) to be disturbed. Rather than conduct a new survey for the expansion, 50% is the estimate for pre-mining vegetation ground cover. The reclamation requirement is that the land be returned to a useful condition with a minimum of 70% of the pre-mining vegetation ground cover. All areas in the mine will be reclaimed with a minimum of 35% vegetation ground cover

The percent ground cover is determined by sampling the vegetation type(s) on the areas to be mined (see Attachment 1 for suggested sampling methods).

(a) Vegetation Survey - The following information needs to be completed based upon the vegetation survey:

Sampling Method	Transect-Nested plot
Number of plots or transects (Min 10)	3 Transects – 10 Plots each. Total 30

Ground Cover	Percent
Vegetation (Perennial grass, forb, and shrub cover)	30
Litter	45
Rock/rock fragments	23
Bare Ground	2
	100%

Re-vegetation Requirement
(70% of above vegetation figure)

List the predominant perennial species of vegetation growing in each vegetation community type.

Querus Gambelli (Gambel Oak)
Galium Aparine (Bed Straw)
Poa Pratensis (Bluegrass)
Hahonia Repens (Oregon Grape)
Elymus Spicata (Wheatgrass)

Note, the original vegetation survey (Appendix A – NRCS Soil Profile Data) prepared in June, 2000 included transects and plots representative of the soils from Gambel Oak stands, which are representative of the current expansion area. (See Appendix A, Page 1, ¶ 7)

(b) Photographs - The operator may submit photographs (prints) of the site to show existing vegetation conditions. These photographs should show the general appearance and condition of the area to be affected, and may be utilized for comparison upon reclamation of the site. Photographs should be clearly marked as to the location, orientation and the date they were taken. (See Exhibit F for details.)

106.8 - Depth to groundwater, extent of overburden, geology

(See Exhibit F for details.)

Castle Valley Stone will implement best management practices in controlling erosion and rain water runoff. As rock from the face of highwalls is removed, the exposed pit floors are developed to be flat or slope slightly toward the highwall. Berms along roads limit surface water flow to slopes and reduce the potential for erosion. The Quartzitic Sandstone is also permeable and well fractured, allowing meteoric water to penetrate quickly rather than pool on the surface.

~~Petroleum and other deleterious materials will be stored in appropriate tanks with secondary containment (bermed and lined or pit with liner having a minimum 110% capacity of the primary storage tank.) to reduce the risk of spills contaminating soils or groundwater. Other deleterious materials such as cleaning agents, oil or paint will be stored in compliance with the guidelines on the respective MSDS sheet. A copy of the MSDS for all such items will be kept at the mine office and made available to all site personnel.~~ No groundwater has been or is expected to be encountered at the mine site. There are no wells on the lease property. One open pit lies ±850' east of the quarry at an elevation of approximately 6,480' above sea level. It collects occasional meteoric water but is normally dry.

Two of the water rights located within 1 mile of the property have well logs which record the depth to groundwater. Water right E4056 is located approximately ½ mile ~~northeast~~ northwest of the mine. According to the well log, the depth to groundwater is 125' below the surface at an elevation of approximately 6,455'. The well associated with water right E2793 also recorded groundwater to be 258' below the surface. The approximate elevation of groundwater at this well is 6,562'. See Exhibit G – Water Rights.

There are two large, spring fed ponds located approximately 1,650' to the west of the quarry and the elevation of the surface water is 6,475' above sea level. The bottom of the planned pit floor of the Brown's Canyon Quarry will be 6,650' and no groundwater is expected to be encountered at that elevation.

Comment [OSG25]: Comment #33 - This paragraph mentions "other deleterious materials." Please specify what other deleterious materials might be stored on site and provide MSD sheets. Reference to deleterious materials in the sentence regarding petroleum was deleted. A new sentence in the paragraph reads, "Other deleterious materials such as cleaning agents, oil or paint will be stored in compliance with the guidelines on the respective MSDS sheet. A copy of the MSDS for all such items will be kept at the mine office and made available to all site personnel"

Comment [OSG26]: Comment #32 - Include verbiage in the text regarding the percentage of secondary containment of petroleum products or other deleterious material. It should be at least 110 percent. Text reads " bermed and lined or pit with liner having a minimum 110% capacity of the primary storage tank"

Comment [OSG27]: Comment #34 - This information should be moved to Section 647-4-109 discussing impacts since petroleum and deleterious materials are impacts. *Noted. Moved. 109.3(e).*

Comment [OSG28]: Comment #35 - Water right E4056 is located to the northwest of the project area, not to the northeast. Noted and Corrected.

106.9 - Location & size of ore, waste, tailings, ponds

(a) Waste Rock/Overburden Stockpiles. The current and proposed overburden/waste stockpile areas are shown in Exhibit E. Total area is estimated to be about 1,000 ft^2.
(b) Removal/Stockpile of Overburden. Overburden is dug from the mining site by a tracked excavator and separated from the useable boulders/rock. It is then moved by a track loader to the overburden/waste storage location for stockpiling.
(c) Waste Rock. Our waste rock is combined with overburden, a mixture of soil and small rocks (not feasible for sale). It is stockpiled and will be used for filling holes, mixing with composted manure and spreading for cover.
(d) Other. We do not anticipate tailing facilities, water storage or treatment ponds. Therefore, we have not considered requirements for effluent discharge points (UPDES) and/or the need for any type of water quality analyses or chemical analyses.

647-4-107 - Operation Practices

(a) Measures taken to minimize hazards to public safety during mining operations:

1) Closing or guarding shafts and tunnels - We do not make shafts or tunnels in this type of mining operation, therefore this is not applicable.

2) Disposal of trash, scrap metal, wood or extraneous debris - This material is collected in metal containers and hauled to the appropriate county dump site.

3) Plugging or capping of drill, core or other exploratory holes - On the occasion that we would dig an exploratory pit or hole that may not be used, we would back fill this pit with a mixture of waste rock, overburden, soil and composted manure and smooth over for seeding in this manner we would lessen a possibility of a person accidentally stumbling into the pit.

4) Posting of appropriate warning sips in locations of public access to operations – Signs indicating mining/quarry operations are in progress are posted at both entrances. The eastern most entrance from the hard surface road is the only "public access" during operating hours (7:00 AM to 7:00 PM, Monday through Saturday). The gate is closed and locked during non-operating hours and on Sundays. The western access gate to the hard surface road is only for Castle Valley Stone personnel. Also, no trespassing signs are posted along the fence line that borders the hard surface road to the south of the quarry.

5) Construction of berms, fences or barriers above highwalls a other excavations – Berms and/or a boulder barrier separate immediate access to the top of the highwall where mining operations take place. Caution signs are posted at the approaches to the highwall drop-off. A berm has been placed around all operating areas, as required by MSHA.

(b) Environmental and erosion measures within mining operations areas:

1) Measures taken to avoid or minimize environmental damages to natural drainage channels - Mining is not conducted in channels, stream beds or drainage. They are left to flow naturally.

2) Measures taken to control and minimize sediment and erosion on areas affected – Most areas currently being mined are virtually devoid of sediment. The largest amounts of "sediment" are in the loading and maneuver areas at the bottom of the high wall. Operations normally must cease during heavy rains on mow, due to the slick conditions and we do not operate from December through March, when the heaviest and most severe weather occurs, decreasing the possibility of erosion caused by equipment.

3) Measures being taken to prevent sediment from leaving disturbed area - Berms of rock dirt and overburden are located around the operating areas.

4) Potentially deleterious materials that may be stored on site.

- Fuel, oil and grease for equipment

5) Measures taken to salvage and store soils to be used in reclamation - attempts will be made to salvage all soil, no matter how sparse. When moving into a new area for exploration and eventual mining, the soil will be scraped off the rock and transported to one of the topsoil storage areas. Often soil will be interspersed in the excavated rock. This soil/rock is placed in the overburden pile for eventual re-use in reclamation.

6) Protection of stockpiled topsoil - the topsoil will be in a "lowered" or dug out location. Soil erosion from rain, wind, snow and any other elements will be minimal.

~~7)~~ Reclamation to be done during active mining operations prior to final closure - it is anticipated that we will fill exploratory holes/pits as we dig them and decide we will not use them. Roads that are not used will be reclaimed as long as they are not necessary for emergency access or use. We will also anticipate holding off on any larger reclamation efforts until we have about an acre of land to reclaim.

~~8)~~7) ~~Landslide Area – This area is to be reclaimed concurrently with mining beginning in 2014 and concluding in approximately three years. Castle valley will remove rock from the top of the slide, process the useable material and remove the smaller aggregate to stable stockpiles. Soils beneath the landslide will be salvaged for use during reclamation. The exposed soils remaining below the slide will be seeded periodically to discourage weeds with either an interim seed mix or approved seed mix for reclamation~~.

R647-4-108 - Hole Plugging Requirements

Since this operation does not intend to drill holes, we feel this portion is not applicable to our operation.R647-4-109 - Impact Assessment

This operation does not intend to drill holes, but if any drill holes are proposed in the future the operator will amend the plan and follow the hole plugging requirements of~~In the event the operator determines that drilling is necessary, the operator will follow the rules for hole plugging as outlined in~~ **R647-2-108.** ~~**Hole Plugging Requirements.**~~

~~*Drill holes shall be properly plugged as soon as practical and not be left unplugged for more than 30 days without approval of the Division. The procedures outlined below are required for the surface and subsurface plugging of drill holes. The Division may approve an alternate plan, if the operator can prove to the satisfaction of the Division that another method will provide adequate protection to the groundwater resources and long-term stability of the land. Dry holes and nonartesian holes which do not produce significant amounts of water may be temporarily plugged with a surface cap to permit the operator to re-enter the hole for the duration of operations.*~~

~~*1. Surface plugging of drill holes shall be accomplished by:*~~

~~*1.11. Setting a nonmetallic permaplug at a minimum of five (5) feet below the surface, or returning the cuttings to the hole and tamping the returned cuttings to within five (5) feet of ground level. The hole above the permaplug or tamped cuttings will be filled with a cement plug. If cemented casing is to be left in place, a concrete surface plug is not required provided that a permanent cap is secured on top of the casing.*~~

~~*1.12. If the area is tilled farmland, a five (5) foot cement plug must be placed above a permaplug or tamped cuttings so that the top of the cement plug is a minimum of three (3) feet below the ground surface. The hole above the cement plug is to be filled with soil. If cemented casing is to be left in place, a concrete surface plug is not required provided that a permanent cap is secured on top of the casing. The top of the casing and cap must be a minimum of three (3) feet below the ground surface.*~~

~~*2. Drill holes that encounter water, oil, gas or other potential migratory substances and are 2 1/2 inches or greater in surface diameter shall be plugged in the subsurface to prevent the migration of fluid from one strata to another. If water is encountered, plugging shall be accomplished as outlined below:*~~

~~*2.11. If artesian flow (i.e., water flowing to the surface from the hole) is encountered during or upon cessation of drilling, a cement plug shall be placed to prevent water from flowing between geologic formations and at the surface. The cement mix should consist of API Class A or H cement with additives as needed. It should weigh at least 13.5 lbs./gal., and be placed under the supervision of a person qualified in proper drill hole cementing of artesian flow. Artesian bore holes must be plugged in the described manner, prior to removal*~~

~~*of the drilling equipment from the well site. If the surface owner of the land affected desires to convert an artesian drill hole to a water well, the owner must notify the Division in writing accepting responsibility for the ultimate plugging of the drill hole.*~~

~~*2.12. Holes that encounter significant amounts of nonartesian water shall be plugged by:*~~

~~*2.12.111 Placing a 50 foot cement plug immediately above and below the aquifer(s); or*~~

~~*2.12.112 Filling from the bottom up (through the drill stem) with a high grade bentonite/water slurry mixture. The slurry shall have a Marsh funnel viscosity of at least 50 seconds per quart prior to the adding of any cuttings.*~~

Comment [OSG29]: Comment #36 - As previously written "Please rewrite. 'This operation does not intend to drill holes, but if any drill holes are proposed in the future the operator will amend the plan and follow the hole plugging requirements ofR-647-108.'" The Division prefers the verbiage written in this text block versus the blue line verbiage written in NOI submitted on June 9, 2014. Noted. Change made to text.

R647-4-109 – Impact Statement

109.1 - Impacts to surface & groundwater systems

There are no surface or groundwater systems in the current or proposed mining locations that will be affected. No groundwater has been encountered in the quarry to date. As the mine progresses to the southeast, the elevation of the pit floor will rise at an overall slope not exceeding 3H:1V. The proposed expansion area is at higher elevation than the surrounding terrain (See the cross sections on Exhibit E which depict profile of the hill). There are no seeps or springs within the mine area. The nearest stream is approximately 500' from the toe of the land slide and 100' lower in elevation than the lowest waste rock piles. Depth to groundwater is summarized in Section 106.8. The nearest occurrence of groundwater/surface water is at the spring fed ponds located 1,650' west of the mine area. The elevation of the groundwater in the ponds is approximately 6,475' and all mining to date and proposed in the future is at higher elevation. Mining activities will have no impact on the surface waters of the ponds or the nearby stream.

Comment [OSG30]: Comment #37 - Additional information is required as to where groundwater occurs and a justification as to why there is no hydrologic connection with the site. The closest surface occurrences of water should also be documented here. Text now includes the phrase, "No groundwater has been encountered in the quarry to date. As the mine progresses to the southeast, the elevation of the pit floor will rise at an overall slope not exceeding 3H:1V. The proposed expansion area is at higher elevation than the surrounding terrain (See the cross sections on Exhibit E which depict profile of the hill). There are no seeps or springs within the mine area. The nearest stream is approximately 500' from the toe of the land slide and 100' lower in elevation than the lowest waste rock piles.... The nearest occurrence of groundwater is at the spring fed ponds located 1,650' west of the mine area. The elevation of the groundwater in the ponds is approximately 6,475' and all mining to date and proposed in the future is at higher elevation.

109.2 - Impacts to threatened & endangered wildlife/habitat

(a) Impacts on wildlife habitat - Minimal. Some rabbits, chipmunks and rock chucks live in and around the rock and move as the rock moves.

(b) Impacts to big game species - Minimal. Big game, normally deer, pass through the quarry areas.

(c) Impacts to riparian areas - no riparian areas exist in the mining operation areas.

(d) Impacts to waterfowl (flyover, temporary or permanent residence) – none

(e) Threatened or endangered wildlife species - none.

Comment [OSG31]: Comment #38 - Surface water bodies in the vicinity of the project area need to be discussed here, their relative location to the mining disturbance and whether or not any operational activities will have an effect on the water bodies. The nearest occurrence of groundwater/surface water is at the spring fed ponds located 1,650' west of the mine area. The elevation of the groundwater in the ponds is approximately 6,475' and all mining to date and proposed in the future is at higher elevation. Mining activities will have no impact on the surface waters of the ponds or the nearby stream

Comment [OSG32]: Groundwater findings from Section 106.8 should also be summarized in this section. Noted. See previous 2 comments.

(f) Measures taken to minimize or mitigate any impacts to wildlife or endangered species - N/A.

109.3 - Impacts on existing soils resources

(a) Impacts to existing soil and plant resources will be significant in the 29.7 acre mine area. ~~minimal.~~ Topsoil will be salvaged, stockpiled and protected from dispersal with interim seeding. Two soil stockpiles will be utilized. Stockpile 1 will have a capacity of 25,000cy and Stockpile 2 will have 15,000cy (See Exhibit B – Operations). Details pertaining to the amount of overburden available for salvage are described in R647-4-106.5. Some of the fine grained waste material that is produced by the operation will be added to the stockpiles to assure an abundance of material for reclamation. The soil stockpiles will be seeded with an interim seed mix, most likely to be ryegrass or crested wheatgrass or a division recommended seed. The vegetation will decrease the potential for erosion. Stockpiles will be generally level on top and the sides will be sloped to reduce the potential of rain water erosion. Berms of larger stone will be placed around the stockpile bases to prevent disturbance by vehicle traffic and add stability to the piles.

(b) Impacts to riparian or wetland areas - none.

(c) Impacts to threatened or endangered plant species - none

(d) Measures to be taken to minimize or mitigate impacts to soil and plant resources – all new exploration or digs are developed with a sense toward least disturbance to existing soil and plant resources. See 109.3(a) for additional mitigation to protect soils. Final reclamation will include re-seeding with the appropriate seed mix included with this notice, amending with composted manure and maximum slopes of 2H:1V to reduce erosion. Final grading will include ripping or furrowing along the contours of slopes, contour imprinting with tracked equipment or other means to discourage storm water surface sheeting such as drag harrowing or shallow contour disking.

~~(d)~~(e) Petroleum will be stored in appropriate tanks with secondary containment (bermed and lined or pit with liner having a minimum 110% capacity of the primary storage tank.) to reduce the risk of spills contaminating soils or groundwater. Other deleterious materials such as cleaning agents, oil or paint will be stored in compliance with the guidelines on the respective MSDS sheet. A copy of the MSDS for all such items will be kept at the mine office and made available to all site personnel.

109.4 - Slope stability, erosion control, air quality, safety

(a) Slope stability - will be stabilized to 2 horizontal : 1 vertical minimum.

(b) Erosion - See section 109.3 for details in protecting soils and reducing erosion. Best management practices will be utilized to reduce or eliminate erosion that include, but are

Comment [OSG33]: Comment #40(a) As previously written, "Disturbance to 26+ acres is a significant impact to soil resources - Please discuss soil impacts and the plans to mitigate. This would include salvaging all available soil resources for reclamation, protection of stockpiles, etc." The reference to impacts on soil being minimal has been deleted.

Comment [OSG34]: Comment #40(b) While the mitigation plans are generally discussed, the plan still states that the impacts to soils are minimal. This needs to be corrected. Also, provide more detail in the plans, or reference the pages that discuss the plans in detail. The plan for stockpiling enough overburden and soil for reclamation is described in more detail and also references the stockpiling requirements listed in section 106.5 and on Exhibit B – Operations.

Comment [OSG35]: Relates to comments 32-34

not limited to slope design, berms, soil stockpiles, interim seeding, diversion ditches, access road design and traffic control.

(c) Air quality - Castle Valley Stone will use a water truck, either operated by contractor or ~~Castle valley~~Castle Valley employees, to spray water on roadways as needed to minimize dust. If feasible, roads may be treated with magnesium chloride to assist in moisture retention and dust minimization.

(d) Public health and safety - Accesses are posted with Warning/danger notification signs that will remain "post mining."

109.5 - Actions to mitigate any impacts

Comment [OSG36]: Comment #41 - In this section, please reference the preceding sections for actions to mitigate impacts. Text with summary of mitigation and references to other section was added.

The following is a summary of actions to mitigate and minimize impacts at the Brown's Canyon Quarry:

(a) Surface and Groundwater Systems
   1. All mining will be above ground water levels.
   2. Fuel will be stored in tanks with 110% secondary containment.
   3. See section 109.1 and 106.8.

(b) Impacts to Threatened and Endangered Species
   1. There are no endangered species found in Summit County.
   2. The Greater Sage-grouse is a candidate for listing as a threatened species. The Brown's Canyon Quarry is not located with the boundary of a Sage-Grouse Management Area. Habitat near the mine has been identified by the Utah Division of Wildlife Resources as occupied by sage-grouse with both winter and brood rearing potential. No mitigation necessary.

(c) Impacts on Existing Soil Resources
   1. Details for the preservation and post-mining restoration of overburden, vegetation and soils in the mine area are found in sections 106.2, 106.5, 106.7, 109.3 and 110.5.

(d) Slope Stability, Erosion Control, Air Quality, and Safety
   1. Slope Stability – Plan requires maximum overall slopes of 3H:1V, except for the rock highwall which will be managed with a slope of 1H:1V.
   2. Soil stockpiles will be seeded periodically to assure vegetation minimizes erosion. See Section 109.4.
   3. Air Quality – Roads are regularly wetted to reduce dust.
   4. Public Safety – See Section 109.4.

R647-4-110 - Reclamation Plan

110.1 - Current & post mining land use

Other than current mining operations, the land uses for this area has been cattle grazing and deer hunting. It is anticipated that post-mining, the land uses will continue to be cattle grazing and deer hunting.

110.2 - Roads, highwalls, slopes, drainages, pits, etc., reclaimed

(a) Road reclamation. Roads will be graded and ripped and then re-seeded. Where necessary, holes and gouges will be filled to the level of the road bed. Final configuration is expected to be grass/oak covered.

(b) Highwall reclamation. Highwalls shall be reclaimed and stabilized by backfilling against them or by cutting the wall back to achieve a slope angle of 45 degrees or less as required by R647-4-111.7. ~~It is expected that any highwalls will, eventually be worked to a 3 horizontal : 1 vertical (3H:1V) slope.~~, ~~W~~The highwalls will be reclaimed with a maximum slope of 3H:1V. We will ~~then~~ add a mixture of overburden, topsoil and composted manure over the highwall face, which will then be seeded. Final configuration is expected to be grass covered.

(c) Slope Reclamation. We will re-grade those slopes more than 3h:1v configuration, and add a mixture of overburden, topsoil and composted manure, then re-seed. For those slopes that consist mostly of dirt, we will re-grade as necessary and seed. Final configuration is expected to be grass covered.

(d) Waste dumps/overburden. The only waste by-products are rock and soil mixed. This is stock-piled for use in reclamation. Where the dumps remain, will grade to less than 3h:1v, add topsoil and composted manure' as necessary and seed. Final configuration is expected to be grass/oak covered.

(e) Pits. Any pit or exploration hole will be filled with a mixture of overburden, topsoil and composted manure, smoothed and seeded. Final configuration is expected to be grass/oak covered.

a. Other. We feel the following are not applicable to this mining operation: impoundments; drainage/natural drainage patterns; ponds; shafts; adits; drill holes; and leach pads.

110.3 - Description of facilities to be left (post mining use)

It is not anticipated that any surface facilities will be left after mining operations or reclamation.

110.4 - Description or treatment/disposition of deleterious or acid forming material

Deleterious materials are not present or used. Trash is collected in metal containers and

removed from the site weekly. There will be no trash pit or trash receptacles remaining on the site after mining operations have ceased.

110.5 - Revegetation planting program

(a) Soil material placement

- Volume of soils and approximate depth-Approximately 8,000CuYds at 6" deep
- Sources of soils – Local quarry sources
- Agronomic analysis - See Exhibit F (Vegetation and Soil Baseline Report)
- Alternative materials/amendments to be applied in lieu of soils – Addition of composted manure.
- Methods used to transport and place soils - Use of dozer/loader.

(b) Seed Bed Preparation

- Preparation of seed bed and equipment to be used - Use of dozer/loader with ripping devise, where required. Will be left rough (moon scaped). Area is not expected to be used for recreation.

(c) Seed Mixture- (Species to be seeded)

Common Name	Name Species	Rate Lbs/Acre
Thickspike wheatgrass	Agropyron Darystachum	2.0
Bluebunch Wheatgrass	Agropyron Spicatum	2.0
Intermediate Wheatgrass	Apropyron Intermedium	1.0
"Piute" Orchard Grass	Dactylis Glomerata	0.5
Basin Wildrye	Elymus Cinereus	2.0
Ladac Alfalfa	Medicaso Sativa	1.0
Yellow Sweetclover	Melilotus Officinalis	0.5
Rocky Mountain Penstemon	Penstemon Strictus	0.5
Small burnet	Sanguisorba Minor	1.5
Mountain Big Sagebrush	Artemisia Tridentata Vaseyana	0.1
Serviceberry	Amelanchier Alnifolia	1.0
Forage Kochia	Kochia Prostrata	0.5
Bitterbrush	Purshia Tridentata	1.0
	Total Lbs/Acre	13.6

(d) Seeding Method

- Broadcast seeding

(e) Fertilization- (Method, type and application rate) – N/A

(f) Other Re-vegetation Procedures – N/A

R647-4-112 – Variance

Comment [OSG37]: Comment #42 - No variances were requested, and no response is needed. No Action Taken.

None requested.

R647-4-113 – Surety

See Attachment.

XI. SIGNATURE REQUIREMENT

I hereby certify that the foregoing is true and correct. **(Note: This form must be signed by the owner or officer of the company/corporation who is authorized to bind the company/corporation).**

Signature of Permittee / Operator/Applicant:_____

Name (typed or print): _____

Title/Position (if applicable): _____

Date: _____

PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.
Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: ( ) Yes (x) No